

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 June 2006 (22.06.2006)

PCT

(10) International Publication Number
WO 2006/065266 A3

(51) International Patent Classification:

C08J 3/00 (2006.01) *C08J 9/40* (2006.01)
C08J 9/32 (2006.01) *C08K 9/00* (2006.01)

(21) International Application Number:

PCT/US2005/013864

(22) International Filing Date: 20 April 2005 (20.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/563,659 20 April 2004 (20.04.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

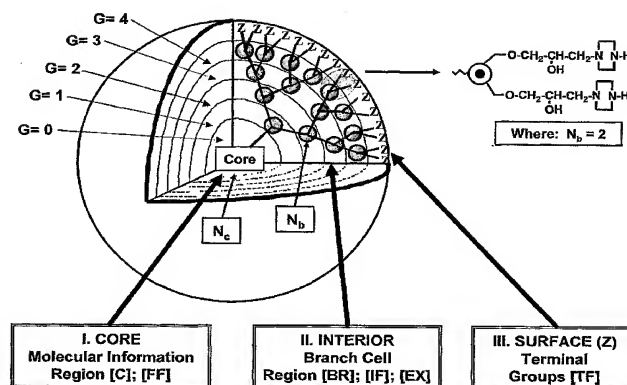
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: DENDRITIC POLYMERS WITH ENHANCED AMPLIFICATION AND INTERIOR FUNCTIONALITY



(57) Abstract: Dendritic polymers with enhanced amplification and interior functionality are disclosed. These dendritic polymer are made by use of fast, reactive ring opening chemistry (or other fast reactions) combined with the use of branch cell reagents in a controlled way to rapidly and precisely build dendrimer structures, generation by generation, with precise structures with cleaner chemistry, typically single products, lower excesses of reagents, lower levels of dilution, higher capacity method, more easily scale to commercial dimensions, new ranges of materials, and lower cost. The dendrimer composition prepared have novel internal functionality, greater stability, e.g., thermal stability and less or no reverse Michaels reaction, and which reach encapsulation surface densities at lower generations. Unexpectedly, these reactions of poly-functional branch cell reagents with polyfunctional surfaces do not create gelled materials. Such dendritic polymers are useful as demulsifiers for oil/water emulsions, wet strength agents in the manufacture of paper, proton scavengers, calibration standards for electron microscopy, making size selective membranes, and agents for modifying viscosity in aqueous formulations such as paint. When these dendritic polymers have a carried material associated with their surface and/or interior, then these dendritic have additional properties due to the unique characteristics of the dendritic polymer.



WO 2006/065266 A3



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- *of inventorship (Rule 4.17(iv))*

Published:

- *with international search report*

(88) Date of publication of the international search report:
14 September 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.